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Economic Conditions
Governmental Finance
United States Securities

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General Business Conditions

THE month of October has brought nothing to light calculated to disturb confidence in the business outlook. Industry, to be sure, is quieter than at this time a year ago, and prospects are that the current quarter may not be quite as satisfactory as the final quarter of 1926. We see no likelihood, however, of a decline of sufficient magnitude to seriously threaten the good record thus far established for 1927.

Third quarter earnings statements for leading industrial corporations now being made public show a decrease, as expected, when compared with figures for the third quarter of last year. The General Motors Corporation maintained its record breaking pace, net both for the third quarter and for the nine months exceeding corresponding figures for all previous years, and there were gains also among leather, textile, tobacco, electrical, and amusement companies. The general run of companies showed decreased earnings, with the decreases especially marked in the oil and iron and steel groups. Net profits of the United States Steel Corporation for the quarter, amounting to $21,585,425 after all charges including depreciation, compared with $31,709,905 in the third quarter of last year, were the smallest since the first quarter of 1925. Total net earnings, however, of 122 miscellaneous industrials (including United States Steel and General Motors) that have thus far reported, are down only 13 per cent for the quarter and 3½ per cent for the nine months as compared with last year. This is by no means a bad showing considering the unusually high level of 1926 earnings.

Within the past week the National Association of Manufacturers has given out the result of its annual survey of conditions, based upon a canvass of twenty-two lines of industry. The summary indicates a slightly lower state of activity than existed one year ago, but of the reports upon the prospects for Winter trade 8 per cent rate them as excellent, 44 per cent as good and 40 per cent as fair. Comparing business now with last year, 33 per cent of replies pronounce it better, 27 per cent as unchanged and 40 per cent as lower. Reporting upon labor employment 43 per cent note an increase and 57 per cent a decrease, but in most cases both increases and decreases are reported as small.

Electric current consumption for light and power was practically the same for September as for that month last year, and is said to have been rising satisfactorily in October.

Measured by the usual tests little basis for pessimism appears. There is no inflation of prices. Inventories are generally at low levels. Industrial efficiency is increasing, lowering costs of production and thus maintaining the purchasing power of the mass of the people in step with the increase in the volume of output. The transportation system is functioning smoothly. Labor supplies are ample, and the relations between labor and capital never more amicable. Disparity between agricultural and non-agricultural prices is being corrected and farm prosperity is returning. Finally, money continues easy and favorable to the employment of funds for expansive purposes.

These are not preliminary symptoms of recession, but rather the usual stage-setting for expansion. With business standing on solid ground, it seems probable that reaction has gone about as far as it is due to go, and that barring seasonal slackening and shut downs for inventory-taking any change henceforward will be on the side of improvement rather than the reverse.

Improvement in New England

President Rowland B. Jacobs, of the New Hampshire Manufacturers' Association, at the annual meeting of the Association on October 27, at Manchester, said that the industries of the State had been going through a process of readjustment, now to a great extent completed, and added:

> In general, conditions of manufacturing in New Hampshire show great improvement. We are beyond the reconstruction period. More mills and factories in our State are making profits than at any other time in the last four years.

Effect of the Ford Shut-down

We have emphasized repeatedly in previous issues of this Review our belief in the widespread unsettling effects of the Ford shut-

down on business. When an industry which has grown to the proportion of Ford's, giving direct employment to approximately 140,000 workers (counting all subsidiary lines but excluding dealer organization), and affecting the employment of thousands of others through its purchases of materials, practically closes up shop for six months, the effect on business in general cannot be other than serious.

It is known, however, that there is a large accumulated demand for cars which has been held back in anticipation of the new product, and which is expected to benefit not only Ford, but other manufacturers as well. How far the decrease of 624,190 in the number of automobiles produced thus far this year as compared with last year reflects solely the interest in the new Ford line remains to be seen, but one thing certain is that a gap has been made in automobile output which will have to be made up sooner or later. No one expects the automobile industry to resume the rate of expansion characteristic of its early development, but no one believes that it is going to take any permanent step backward. Unless all signs fail 1928 should be a big year in automobile manufacturing, with corresponding benefit to all lines of business.

The Promise of Continued Building Activity

The volume of construction work going on throughout the country continues at high levels and no likelihood of a serious decline is seen for many months. Contracts awarded during August and September were somewhat under the figures of August and September last year, but for the period from January 1 to the end of September the dollar contract total was only 1 per cent behind that of the same period of 1926 and was 7 per cent ahead of that in the corresponding period of 1925.

Outlook for building was discussed in connection with wage policies at the twenty-first annual convention of the Building Trades Department of the American Federation of Labor held recently in Los Angeles, where representatives of more than 1,000,000 organized workers in the building trades were unanimously agreed that prospects continued favorable. Some surplus of building workers was found to exist in various localities particularly in the East, but the amount of idleness was not regarded as serious nor was it expected to increase. On the basis of this survey wage reductions during the coming year were declared to be out of question. At present levels, basic building wages, according to an index computed by the Federal Reserve Bank of New York, stand at record high levels, slightly higher than a year ago. Due, however, to the gradual decline in building material prices, the index of general construction costs indicates a level some 7 per cent lower than in September 1926.

Trend of building this year is illustrated by the following table giving figures of the F. W. Dodge Corporation comparing contracts awarded in 37 states during the first three quarters of this year and last:

	1926	1927
Commercial	$722,435,800	$722,737,700
Educational	300,762,100	294,637,200
Industrial	536,076,400	360,457,100
Public Works & Utilities	838,923,000	986,877,900
Residential	2,010,539,700	1,907,511,400
All Others	432,042,800	524,260,800
Total	$4,840,779,800	$4,796,482,100

It will be noted that residential construction has undergone a considerable decline, which has been offset by increases in other types of building, chiefly in public works and utilities, which include large power projects and engineering works, such as building of roads, subways, bridges and the like. With credit conditions continuing favorable and construction costs easing slightly the outlook for further activity along these lines is good.

Also, the suggestion is made that building activity does not logically terminate with engineering works, in that building of roads, bridges and subways by extending transportation facilities into new areas opens up new opportunities for a spurt in residential building. So long as such work can be financed it can go on regardless of its effect in drawing the population from and creating vacancies in the older types of dwellings.

Steel on Part-Time

Conditions in the iron and steel industry have been disappointing. Steel demand during October failed to show the hoped for increase and mill operations closed the month at around 65 per cent of capacity, or close to the low point of the year.

September pig iron production amounting to 2,774,949 tons was the smallest in two years, and some additional decrease was indicated for October.

Backwardness in the steel market is due chiefly to the postponement of equipment purchasing by the railroads, the unsatisfactory condition in the oil industry, and the curtailment of automobile production. Structural steel buying is in good volume, due to the high level of building operations, and there is a good demand from the agricultural implement manufacturers.

Reflecting general market dullness, prices of both iron and steel have continued reactionary. Minimum prices for bars, shapes and plates established in August by the Steel Corporation have been generally adhered to both by the leading interest and by the larger independents, but sheets were reduced $2 a ton around the middle of October and scrap prices

were also easier. During the month the Iron Age composite of pig iron prices declined further to a new low level since 1916, and the composite of steel prices receded to a new low for five years.

Strong features of the steel situation are the low stocks in the hands of consumers and the prospects of improved demand from the automobile industry with the return of Ford to production.

Copper Situation Improved

The copper situation shows further improvement. Figures published by the American Bureau of Metal Statistics showed decreases during September of 7,161 tons in stock of refined copper and of 7,369 tons in blister stocks, making a total reduction of 14,530 tons, and bringing the total to the lowest level since August, 1926. Domestic consumption of copper has been running somewhat behind a year ago, due to a lessened demand from the automobile and building industries, but production has been kept under better control and there has been a more satisfactory movement of copper into export channels. During September exports totaled 82,369,898 pounds, 11,835,394 pounds in excess of shipments in September a year ago, while for the year to date the total of 686,-427,600 pounds showed an increase of 10 per cent as compared with the corresponding period of last year.

Reflecting the improved statistical position of the metal, copper prices have shown firmer tendencies, quotations recovering to 13.25 cents, the highest since the early part of August, and ¾ of a cent above the June and July low point of the year.

Of the other non-ferrous metals, lead prices have continued at the lowest levels in five years. With consumption somewhat reduced as compared with 1926, production has consistently exceeded that of last year so that stocks on hand, although smaller than a few months ago, are still too large. Much the same conditions exist in the zinc market, prices being heavy on the continued tendency for production to exceed consumption.

Spot tin prices at New York, after reaching a new low point for the year of 57.75 cents a pound on the last day of September, rallied somewhat during the forepart of October, but again declined to the previous low point during the closing days of the month. Consumption of tin, like that of other non-ferrous metals, has been runing lower than a year ago, a principal cause of the decrease being a falling off in canning operations this year following a heavy overproduction of canned goods last year. The following statement from a recent issue of the "Canner" is significant:

> Canned vegetable packs in the United States will in the aggregate show a tremendous decrease as compared both with last year and the average of recent years. Corn, tomatoes and wet beans are now being packed, with every indication of a heavy falling off in output, particularly corn and beans. Pea canning ended some weeks ago with a decrease estimated at more than 5,000,000 cases as compared with last year.

Cotton Spinning Industry

The cotton spinning industry is so far maintaining the unusual activity which had its inception in last year's cheap cotton. Mill consumption of raw cotton in September amounting to 627,321 bales was 10 per cent greater than in September last year, and the highest on record for the month. Over two-thirds of the September consumption, it is to be noted, was by southern mills, the northern mills showing only a small increase (3,088 bales) as compared with September last year.

However, sales recently have not been keeping pace with production. Decline in cotton prices has caused a marked slowing down in business. September, according to the report of the Association of Cotton Textile Merchants of New York, showed sales of standard cloths running slightly behind production, with a moderate reduction in unfilled orders, and October figures, when available, are expected to further emphasize this condition. Unless the demand for goods reasserts itself in the near future, it seems certain that the question of holding production in check will have to be given consideration.

Generally sound condition of the market up to this time, however, gives confidence that needed readjustments can be made without serious disturbance. Nothwithstanding the very high level of production all year, sales and shipments for the nine months January through September exceeded output by 8.6 and 2 per cent respectively, while stocks at the end of the period were 18.3 per cent smaller than at the beginning and unfilled orders were 47.5 per cent larger.

Woolens and Silks

In other textile lines, woolen mill activity is showing a fair increase over that of a year ago, and some mills are doing a good volume of business, but generally speaking the present position and near-term outlook of the industry is still unsatisfactory. Raw wool prices continue firm, due to moderate world stocks, and this condition is reflected in prices quoted on Spring fabrics which show a stabilized trend of values as compared with the past two seasons.

The silk industry continues very busy, deliveries of raw silk to mills in September and for the first nine months of the year being the largest on record. The industry, however, takes little satisfaction in this showing inasmuch as profits have not shown corresponding improvement owing to excessive competition and weakness in raw silk. The latter continues to decline despite an announcement

to the effect that the Bank of Japan is prepared to advance funds for the warehousing of 50,000 boxes of silk to be held until the market is in a position to absorb it. In the week ending October 22 the price reached a new low level for the year.

The boom in rayon is unabated, and leading companies have announced output sold up to February 1. Some producers have already sold more than in the entire year 1926, which was a record year.

Gains in Leather Trade

Outlook in the leather industry is the most favorable since the war. The reduction in the country's excessive stocks of hides and leather, coupled with a substantial gain in shoe production this year, has put this industry back on its feet.

Prices of packer hides at 23½ cents have recovered from the temporary dip made in August and are again at the highest levels since 1920. Not only have surplus stocks been worked off, but there is assurance against overproduction for some time to come in the reduction in the number of cattle in the country available for slaughter. It takes time to build up depleted herds, and no one grows cattle solely for the hides, although the rise of hides undoubtedly is a factor in the advance of cattle in the past year.

Whereas five years ago stocks of sole leather were large enough to last nearly a year and a half, today they are equal to about a month and a half's consumption. This is much the lowest stock on record.

In the shoe industry production and sales are continuing to run above a year ago. Gains in output during September, the latest month for which complete figures are available, amounted to 7 per cent over the total of September last year, while from January 1 to the end of September the total shows an increase of 8 per cent.

Settlement of the Coal Strike

Settlement of the soft coal strike in Illinois, followed quickly by similar settlements in Indiana, Iowa and other outlying regions, removes what menace there may have been of a soft coal shortage this Winter. Though the strike continues in Ohio and Pennsylvania, production in the newly-pacified districts, in the non-union fields, and the constantly growing output of heretofore union mines in Ohio and Pennsylvania that have gone non-union, will be more than ample to supply the country's needs.

From the standpoint of general business the settlement should exert a favorable influence, stimulating employment and trade in the regions affected and providing more normal traffic for the railroads. From the standpoint of the coal industry itself, the settlement leaves much to be desired.

By the terms of the settlement, the operators agree to continue to pay the Jacksonville scale temporarily, pending a study of the demands of both sides by a committee of operators and miners whose report is to be the basis of a new agreement to take effect April 1 next. Thus the issue is not settled, but merely postponed, and the Illinois and Indiana mines are committed to a $7.50 a day scale of wages up to next Spring at least, as compared with the $4.50 paid in non-union territory. How much business the high-cost operators will be able to get under these conditions remains to be seen, but the settlement at least assures a supply of coal through the coming Winter.

Under the conditions, it is hard to see what the unions in Ohio and Pennsylvania hope to gain by further resistance. With their chief weapon—the menace of coal shortage—gone, it would seem the natural thing for them to come to some agreement whereby they may participate so far as possible in what business is being done. Thus far the non-union fields have steadily increased their production, and under existing conditions seem likely to continue doing so until they are able to supply the entire demand.

The fundamental difficulty with the coal industry, of course, is the fact that there are too many mines and too many miners to provide a profitable living for all. Under such conditions competition is of the keenest sort and the business naturally goes to the lowest cost producers.

With the resumption of mining in the western fields, prices have gone off to new low levels since July. Production is increasing and in the week of October 15 amounted to 10,550,000 tons, the largest total since the beginning of the strike.

The Situation in Agriculture

As a result of an exceptionally favorable October the corn crop has made a much better finish than was thought possible three months ago. The October estimate of the Department of Agriculture is 2,603,437,000 bushels, which compares with 2,646,853,000 last year and 2,767,000,000 the five year average. The price has declined accordingly, and at about 83 cents is about 9 cents above the price at this time last year. In our opinion the increased yield over what was counted on September 1st fully compensates the farmers as a class for the loss in the nominal value of the crop which has occurred since then. Corn is primarily a raw material used by the farmers in preparing finished products, and a short supply damages them more by interference with their normal operations than any rise of the market price can make good.

Exports of corn from Argentina have been very large in recent months, this movement since April 1st last aggregating 205,000,000 bushels, against 112,000,000 in the same period last year.

The price of wheat also has suffered in the last month, by reason of world news and confirmation of the big Canadian crop. The big southern hemisphere crops of last Winter have sent more wheat to Europe in the past six months than ever before, and the growing Argentine crop is very promising, while the growing Australian crop is suffering from drought and probably will yield considerably less than last year. The crop of the Canadian northwest is large, but has suffered in quality from wet weather in harvest. Exports from the United States to date are slightly higher and from Canada slightly less than to this date in 1926. The price of wheat in Chicago is about 15 cents per bushel below the price at this time last year. The total crop is estimated at 867,000,000 bushels against 833,000,000 bushels last year. The Spring wheat crop is now estimated at 313,000,000 bushels, against 205,000,000 last year.

Other farm crops make a generally good showing, with the exception of tobacco, apples and peaches. Oats are somewhat below last year, but barley is a record crop, and rye, buckwheat, flaxseed, potatoes, peanuts and hay are larger crops than last year. With the improvement in corn during September the Department of Agriculture's condition estimate for all crops excluding cotton was only .2 of one per cent below the October average of the last ten years.

The latest government estimate upon the cotton crop is 12,678,000 bales, which is more than 5,000,000 bales under the 1926 crop. Even so the large carry-over assures an ample supply of cotton until another crop is harvested, but far-sighted members of the trade are recalling that a similar situation existed in 1921, and that the establishment of the weevil over a wide area in that year led to another short crop in 1922. In its weekly report of October 26, the Weather Bureau makes the statement that weevils are found in unusual numbers in the infested areas of the belt, thus indicating an unusually large quantity going into hibernation for the winter. A mild winter for 1927-28, therefore, might give rise to justifiable anxiety over the outlook for future requirements. Just how much this may influence the buying policy of manufacturers will depend on the character of the winter season.

The Live Stock Industry

A few years ago the cattle situation was desperate and cattle-men in the depths of despair. There was no mistake about the gravity of the situation. On the upward swing of the cycle two influences had combined to raise prices and over-stock the beef cattle ranges, viz: the war demand for beef and the policy of withholding heifer calves from slaughter to recruit the herds. With prices rising and the business apparently riding the top wave of prosperity, cattle-producers went heavily into debt to increase their holdings, after the manner of speculators in a real estate or stock exchange boom. When the break came the markets were overwhelmed for several years by the flood of cattle, moving regardless of price to pay debts. It was one of the most unfortunate and distressing periods in the history of the cattle industry.

At last the outpouring of cattle in liquidation came to an end and in the past year the business has returned to normal conditions, and the prices of all kinds of cattle have improved very much. In the past month the best grade of cattle sold up to $17.75 per cwt. in Chicago, the highest peace-time price ever made in that market, and at this time the run of fed steers is bringing $3 to $6 above the prices of one year ago. Advances have been particularly marked since September 1, the average price of all grades since that date increasing from $12.56 to $14.75. This sharp advance accompanies a marked falling off in cattle receipts in the principal markets, the total for six weeks ended October 15 showing a decrease of 19 per cent as compared with the corresponding period of last year.

The Texas "Cattleman", a representative organ of the industry, in its October number says:

> This office has heard men it regards as "old timers" in the cattle business express themselves that they have never witnessed, or not in many years, such a combination of good markets, good cattle, and generally good range conditions as in the summer of 1927 and predict this condition will follow through the fall months.

The Amarillo Daily News, under a heading, "Cow Business in Fine Shape," has the following:

> The live stock industry of West Texas and the Panhandle is in the best condition since the market slump in 1919 and 1920.
>
> Ranges are in excellent condition, cattle are fat and it appears that there will be an abundance of winter pasture as well as sufficient row crops produced in this section to winter cattle in fine shape.
>
> The market is the best in years and some classes of cattle are commanding prices as high as during the period immediately following the World War.
>
> The long predicted shortage in cattle seems to be a reality. Experienced cowmen say that the Panhandle has less than 30 per cent of the number of range cattle on hand 10 years ago.
>
> One of the most pleasing features in the change of conditions in the industry is the growing demand for cows and heifers. Cowmen of the lower Panhandle and Southwest Texas have been scouring this section for breeding cattle. They declare that their ranges must be restocked.
>
> Registered breeders state that they are also finding a ready sale for their females and it appears cattle industry is in for a new era of prosperity.
>
> Market prices have been good throughout the year and almost every man who summered cattle in Kansas made money, and some of them, lots of it.

The Hog Situation

The hog market, which had made a good recovery from the break which occurred in the Summer, last week suffered a sharp reaction, prices going off $1.50 to $2.00 per hundred weight. Pigs, under weights and packing sows suffered the most, while well-finished hogs above 220 lbs. held up best. With the Spring crop 2 per cent larger than last year in the Corn Belt and 3.5 per cent larger for the country as a whole, and with corn supplies, despite recent improvement in the crop, still considerably under the average, hog marketings may run somewhat higher than a year ago. In short, the situation is now favorable to corn rather than hogs, which is the reverse of a year ago.

Exports of pork products in the eight months of this year ended with August were 670,000,000 pounds, against 789,000,000 pounds in the corresponding period last year, and this probably was a factor in declining prices. Meat packers are understood to have had an unfavorable year thus far, and doubtless have been anxious to get hogs upon a lower basis at the beginning of the Winter season. Lower prices for hogs have given the middle west the worst back set it has had this year.

Money and Banking

The call money market has presented a very easy appearance during the past month, rates for day-to-day money on the New York Stock Exchange declining after the 15th to 3½ per cent, with money available to borrowers on several days at 3 per cent in the "outside" market.

Aside from call money the only change of note in rates was in bill rates, which were revised upward. A large increase this year in the volume of dollar acceptances drawn in financing seasonal commodity exports and discounted in this market caused dealer's portfolios early in October to rise to unusually high levels, and inasmuch as longer bills were not moving freely, rates were advanced by ⅛ of one per cent on 90 and 120-day maturities. At the new levels, 3⅜ bid-3¼ offered, for 90's and 3½-3⅜ for 120's, distribution has been more satisfactory.

In the Stock Exchange time money market funds have been somewhat more freely offered, without, however, materially affecting the general level of rates. At the end of October 60-90 day loans were quoted at 4-4¼ per cent and 4-6 months' money at 4¼-4⅜, approximately the same levels as a month previous.

Open market rates for prime commercial paper were unchanged at 4 per cent, the level to which they were reduced early in August.

Factors in Easier Money

Present ease of call money is in accord with the usual seasonal tendency, the period from the middle of October to the middle of November being frequently marked by some reduction in rates, due to the fact that early Fall trade and crop moving demands have been largely satisfied and currency requirements for the Christmas retail trade have not yet begun to be felt. At this time the balance of interdistrict movements of funds is often towards New York, and this year has not been exceptional in this respect. During the week of October 19 there was a heavy flow to this center, indicated by an increase of $83,000,000 in the gold reserves of the New York Reserve bank, and these funds in seeking employment have naturally exerted considerable pressure on rates.

Contributing also to easier money has been the liquidation that has been going on in the stock market. After increasing steadily in previous weeks to a new high record of $3,434,000,000 on October 19, brokers' loans at New York decreased by $90,000,000 in the ensuing week.

Additional factors, and ones which have been influential all Fall, have been the moderate character of the commercial demand, due to the somewhat reduced volume of trade, and the policy of the Federal Reserve banks in making credit available to the member banks at low rates.

Trend of commercial requirements is illustrated by the movement of unsecured loans of the weekly reporting member banks in leading cities, and by the amount of currency in circulation. Both have had a fair seasonal increase as compared with the Summer low point, but make a less impressive showing when compared with the figures of a year ago. Unsecured loans, which are generally considered representative of commercial borrowing, are still maintaining a lead over a year ago, but the margin of gain has been gradually narrowing, and on October 19 amounted to only $47,000,000 as compared with $384,000,000 at the beginning of the year. Currency outstanding, which is affected largely by payroll requirements, has been running somewhat behind 1926 all year, and on October 1, the date of the last Treasury circulation statement, showed a reduction of $56,000,000.

At the Federal Reserve banks the volume of total bills and securities on hand has increased by $260,000,000 since the Summer low point, reflecting the seasonal demand on the part of member banks for additional Reserve bank credit, and excess of gold exports over imports during the past two months amounting to about $20,000,000. More important, however, than the mere fact of the increase has been its character, which has been chiefly in hold-

ings of securities and acceptances bought in the open market. Because additional Reserve credit has been freely supplied in this way banks have been able to meet the Fall demands upon them without increasing their rediscounts, and money rates, which are closely affected by the amount of rediscounting which the banks have to do, have remained in consequence at low levels.

Outlook for Money

With the peak of the Fall commercial and agricultural demand now over and with the Treasury facing large refunding operations in connection with the maturity of the second Liberty loan November 15, continuation of easy money during most of November seems a foregone conclusion. Present conditions, however, should not mislead bankers and business men as to possibilities in the more distant future. December, with the Christmas trade and large year-end settlements, should see rates more firmly held. As to the trend after the first of the year, this will be influenced in large measure by the course of general business which just now gives promise of being in an upward direction.

The Bond Market

Persistent strength in bond prices during October in the face of an unusually heavy volume of new issues, record brokers' loans, and unsettlement in the stock market, furnish ample evidence of the sound condition underlying the bond market today. Under less favorable circumstances new offerings in such volume as appeared since mid-summer might easily have given rise to signals of distress. That these offerings have flowed to strong boxes of investors with relative ease is evidence not alone of a great potential investment capacity but also of a willingness among investors to accept present interest levels almost as a matter of course. Heavy commitments in long term bonds by banks, insurance companies and other institutions indicate a conviction among those whose business it is to study trends that relatively low bond yields will continue for some time to come.

The Dow Jones average for forty listed domestic corporate issues (10 high grade rails, 10 second grade rails, 10 industrials and 10 public utilities) again broke through to new high levels. High grade "legals" rose to the highest levels in fifteen years, easily passing the previous high mark established in January, 1917. On October 25th, the Dow Jones average for all groups was 98.67, as compared with a high for the month of 98.76, and with 95.08 on October 25th of last year. Following is a comparison of advances in the various groups since a year ago, prices given being as of October 25th:

	1927	1926	Advance
High grade rails	97.22	92.10	5.12
Second grade rails	98.91	94.50	4.41
Public utilities	97.26	94.29	2.97
Industrials	101.29	99.44	1.85

The larger advance in the rail group, while due in part to improving railway credit, is a result also of an increasing demand for "legals" in the face of a restricted supply. The larger volume of new public utility and industrial issues has had a tendency to slow down the advance in these groups. It is interesting to note that since the beginning of the year over a billion dollars in new securities have been offered each by the public utilities and industrials. These two groups are now contending for leadership so far as volume is concerned, but the continued outpouring has kept prices from going forward as fast as they otherwise would.

United States Government Securities

The principal factor in Government finance is the coming retirement on November 15th of the outstanding balance of Liberty Second 4¼s called for payment on that date. This transaction will complete a refunding operation begun in March of this year, when $3,104,520,000 of the Second Liberty issue were still outstanding. Most of the issue has already been absorbed through various exchange offers and outright Treasury purchase. The outstanding balance at present is around $800,000,000. Inasmuch as this issue received exceptionally wide distribution and a fair portion of outstanding bonds is apparently in the hands of smaller holders, many of whom lack investment experience, it is not out of place to emphasize in these columns that interest on these securities ceases on November 15th. It is to the interest of holders to turn in their bonds promptly. Because none of the Treasury exchange offers have succeeded in dislodging these holdings, it seems likely that most of these remaining securities will finally be turned in for cash payment.

On October 24th, there was publicly offered a new issue of $29,000,000 Federal Land Bank Thirty-year 4 per cent bonds at par and interest. This is the first time in the history of the Federal Farm Loan System that a Federal Land Bank issue has appeared bearing a 4 per cent interest rate. The first issue, at the outset of the war and before America was accustomed to high interest rates, bore 4½. Later a 5 per cent rate prevailed for several years, followed by issues bearing 4¾ per cent or 4½ per cent, and more recently, 4¼ per cent, according to prevailing market conditions. These Federal Land Bank issues have always met with a successful market even during the period when the country was experiencing rapid deflation in farm values. Now that agricultural conditions are on the upgrade it is only natural that

the Federal Land Banks, and through them the farmers, should benefit by lower interest rates. Investors in growing numbers are being attracted to these fully tax exempt obligations because of improving agricultural conditions and because even at present levels these bonds bear a return quite as attractive as that available from conservative municipal and state issues.

Municipals

Although the growing interest in municipals displayed by banks, insurance companies and other institutional investors is interpreted by some to mean that such major buyers are replacing some of their United States Government holdings with municipal obligations offering a higher yield, the bond market as a whole is not counting on any great shift in funds to municipals when the Second Liberty 4¼s are paid off on November 15th. If the Government program of interest and debt reduction continues on the same basis as in the past, we may expect that with declining yields on Government issues, municipal and state bonds offering a higher income will be used extensively for replacement. The prices of high grade municipal bonds were firm during the month. Second grade issues enjoyed a slightly rising tendency.

Public Utilities

Further evidence of the rapid growth of the public utility industry is to be seen in the exceptional amount of new financing during recent months, culminating in a record volume for October. It is estimated by the Bureau of Public Service Information that the utility industry during the first nine months of this year absorbed nearly $1,500,000,000 of new capital. There were also refunding operations approximating $500,000,000 more, mostly for the purpose of reducing capital charges on invested money. Among important utility issues appearing during the month were $35,000,000 Philadelphia Electric First and Refunding 4½s due 1967, to yield 4.58 per cent; $66,000,000 New York Power and Light First Mortgage 4½s due 1967, to yield 4.72 per cent; $35,000,000 Shawinigan Water and Power First Mortgage and Collateral 4½s due 1967, to yield 4.75 per cent; and $10,000,000 Duquesne Light Mortgage 4½s due 1967, to yield 4.55 per cent. The fact that such big issues are readily absorbed at these levels indicates that the better utilities are finding a larger place in the investment accounts of those ultra conservatives who until recent years have confined themselves more closely to high grade rails, municipals and other lower yield issues.

Foreign Financing in Volume

Among the new foreign issues offered during the month were four of outstanding size aggregating around $170,000,000. They were: $50,000,000 German Central Bank for Agriculture 6s due 1960; $41,500,000 United States of Brazil 6½s due 1957; $30,000,000 Free State of Prussia 6s due 1952; and $47,000,000 Republic of Poland 7s due 1947. The Brazilian offering, together with £8,750,000 of similar bonds offered in the European market, constitutes the largest external loan ever arranged by that country. The American portion of the Polish loan was part of a total of $71,000,000 issued for stabilization purposes and designed to perpetuate the monetary stability and budgetary equilibrium which the Polish Government has already achieved by its own efforts. Being the third issue by the German Central bank for Agriculture to appear in American markets, the $50,000,000 offering by this organization needed no introduction. Acting through German agricultural credit organizations, some of which have been in operation for more than a century, the Central Bank operates in extending German Agricultural Credits in a way quite similar to that of the Federal Farm Loan system in the United States. These bonds are direct obligations additionally secured by an equivalent amount of direct mortgages on productive German lands on a basis not exceeding 40 per cent of their aggregate assessed value.

Stock Exchange Listing of Foreign Issues

What promises to be an effective step in the enhancement of America's position in international finance, was the announcement during the month of rules for the listing of internal securities of foreign corporations on the New York Stock Exchange. Since the war the New York Stock Exchange has for the first time become an important capital market in an international sense. Practically all foreign listings up to this time, however, have taken the form of bonds and have been written in terms of American dollars. As of July 1st, 1927, there were 239 foreign dollar bond issues of all classes listed, with a market value of about $4,300,000,000; also 16 issues of bonds in foreign currencies with a market value of about $350,000,000. It is believed that provisions for trading in foreign equities on the floor of America's greatest market place will do much to stimulate the flow of American capital abroad. With the added interest in and knowledge of foreign securities that will come from the establishment of the exchange as a true world market, there should naturally follow a further contraction in the spread which still exists between yields on comparable domestic and foreign issues.

Foreign Money Markets

The banking situation on the continent of Europe has tightened perceptibly in the past month, the most significant evidence appearing in the advance of the Reichsbank

discount rate to 7 per cent and of the Bank of the Netherlands rate to 4½ per cent. The Berlin rate was raised from 5 to 6 in June but the Amsterdam rate had been at 3½ since October 3, 1925.

Amsterdam is now the chief market for foreign borrowing on the continent, and the rate of advance there presumably has been due to the fact that foreign loans had turned the balance of payments against that market to an extent which threatened the loss of gold. The Bank thereupon took action to make the Amsterdam market less attractive to outside borrowers.

Credit of all kinds is high-priced in Germany because of the scarcity of working capital, and a great controversy has been going on there between the parties who contend that credits must be cheapened, and those who contend that Germany is in danger of piling up a sum of annual interest obligations which in addition to the annual reparation payments will exceed the ability of the country to provide foreign exchange. There is general agreement that a total cessation of foreign borrowing would precipitate a crisis, but conservative opinion led by Dr. Schacht, head of the Reichsbank, insists that the borrowing should be restricted to enterprises which will create foreign credits at least sufficient to meet their own interest requirements.

Furthermore, the Reichsbank evidently does not want the proceeds of German loans abroad brought to Germany in the form of gold, as it has recently lowered the price at which it will buy gold, obviously for the purpose of discouraging importations. Moreover, although an exception appears to have been made in the case of the recent Rentenbank loan, it does not favor the prompt conversion of the proceeds of foreign loans into Reichsbank credits, for the reason that this would result in their immediate employment in the domestic money market and probably involve an increase in the Reichsbank's currency issues, which it does not want to increase. The Bank evidently desires to conserve the foreign exchange created by loans for essential uses. The country's imports are largely exceeding its exports, which means that foreign exchange will be needed to settle the balances, and besides this demand there are 1,750,000,000 of gold marks (approximately $437,000,000) of reparation payments to make in the year which began September 1st last. Apparently President Schacht is of the opinion that in view of this situation Germany has more need for foreign exchange than for gold or credit-expansion in Berlin.

Sterling Exchange

Exchange in London has been above parity with New York throughout the past month, an unusual situation for the Fall months at all times, and especially remarkable in view of its weakness prior to the lowering of Federal Reserve rates two months ago. Doubtless lower rates in the United States have been a factor, by prompting (1) a moderate demand for sterling as a means of transferring funds from New York to London for temporary employment, and (2) an increased employment of dollars in financing foreign trade, not only between the United States and foreign countries but between foreign countries. As an example of the latter, instances may be cited of recent purchases of wool at London auctions by Belgian buyers, financed by dollar acceptances sold in the New York market, this market being lower than the markets of either London, Brussels, or Amsterdam.

Offerings of export bills in our own trade have been exceptionally light this Fall. It is true that cotton exports have been less than in several years—1,772,383 bales from August 1 to October 21, against 2,082,018 in the corresponding period of 1926 and 1,966,783 in the corresponding period of 1925—nevertheless this season's exports at prevailing prices probably have had a value exceeding those of last year, and it has not been represented by offerings of foreign bills in this market. The Acceptance Bulletin publishes regularly the total of acceptances outstanding at the end of each month, compiled from reports by the banks of seventeen leading cities. The greater part of this paper originates in the foreign trade. This table shows the aggregate amount outstanding at the end of September, 1926, to have been $614,151,287, and at the end of September, 1927, $863,055,029.

Another factor in the situation is the increasing amount of cotton which is consigned to foreign markets by American dealers on their own account. This practice had important development during the period when foreign currencies were fluctuating violently and it was desirable to cut down the time between the purchase of raw materials and sale of finished goods to the lowest possible period, and has been maintained as a continuing service by American exporters to foreign customers.

Of course the financing of American exports in the American money market only postpones the time of payment. It relieves the foreign money markets from the usual Fall drain, but the payments will have to be made in a few months, as these acceptances, running 60 and 90 days, fall due. If it be true that the rise of sterling exchange has been due to the financing of British imports in New York, adverse pressure may be expected to develop shortly. There is little evidence, however, of British financing here.

Japanese Bank Deposit Rates Lowered

Of much interest in connection with the financial situation in Japan is the following statement by the Department of Commerce in the October 17 issue of Commerce Reports:

> Effective October 8, interest rates on deposits in first-class banks in Japan will be reduced to 5 per cent, and in second-class banks to 5.80 per cent, cables Commercial Attaché H. A. Butts, Tokyo, under date of October 6. This action follows the suggestion made by the Minister of Finance at the time of the financial crisis last spring, when it was pointed out that the customary interest rates of 7 to 8 per cent on bank deposits were too high.

The 5 per cent rate is upon deposits for one year, the rate on current accounts being now 1.46 per cent. The rates paid on deposits in Japan have reflected the stringency which has existed in the country during the period since the earthquake, and while there may have been justification for them in the emergency, their influence has been to extend banking operations outside the commercial field, with the results which were revealed in the recent crisis. The decision to lower these rates, therefore, is an important step toward placing the Japanese banking system on a sound basis.

The British Public Debt

The Government of Great Britain has been engaged recently in several important refunding operations, which in view of the extensive operations of our own Treasury in that line are of interest on this side of the water. The debt of the United Kingdom is very much larger than the debt of the United States, and when the war ended it consisted, like our debt, to a great extent of short term obligations, which the Treasury has been obliged to meet chiefly by the issue of new securities.

The British debt reached the peak in December, 1919, with a total of £7,831,744,000, or nearly $39,000,000,000, which compares with £649,770,000, or about $3,150,000,000 on April 1, 1914. On March 31, 1927, this had been reduced to £7,622,945,562, according to book account, but allowance should be made also for £68,327,905, representing bonds which have been paid into the Treasury on account of death duties and not yet cancelled. The actual reduction of principal, therefore, has been over £277,000,000, or about $1,300,000,000.

Results of Conversion Operations

The reduction of principal would have been considerably larger but for the policy which the Treasury seems to have generally followed of making a low interest rate on long term conversion loans, which necessitates offering them below par. Thus the Conversion Loan, which is the sole form of funded debt issued since the war, bears 3½ per cent, is repayable at the option of the Government at par, on three months' notice, on or after April 1, 1961. The first issues of this loan were made for cash in 1924-1925 at an average rate of 77½, and a further issue is now being made for the direct conversion of three loans, aggregating about £209,000,000, which fall due in April, 1928. One of these maturing loans is the first war loan, issued in 1914, bearing 3½ per cent; the other two are bearing 5 per cent and 4 per cent respectively. The terms of conversion are £132-15-0d of 3½ per cent Conversion Loan for each £100 of 3½ per cent War Loan; £142 Conversion for each £100 of 5 per cent National War Bonds; and £134 of Conversion for each £100 of 4 per cent National War Bonds.

These conversion rates correspond closely with the market values of the outstanding issues of the Conversion Loan and bonds for which exchanges are offered. It will be seen that the principal of the debt is increased from 32 to 42 per cent for the sake of an interest rate that is below the present market.

Assuming that as the debt is reduced and capital accumulates, interest rates upon new issues will fall to 3½ per cent, these new issues will ultimately sell at par and possibly better. They offer therefore an unusual prospect of appreciation while yielding nearly 5 per cent. On the side of the Government there is an advantage in getting its debt on a lower interest level, even though the principal is increased. For the present, there is no alternative to paying old issues by means of new ones, and the influence of interest rate reductions is expected to help in further conversion operations. The total results of all conversion operations has been an increase of £284,000,000 in principal and a saving of £1,191,000 in annual interest charges.

The failure to accomplish more important savings by conversion operations has been due to the great volume of maturities to be handled and the fact that current interest rates are but little if at all below the rates borne by the war issues. The latter were taken by the public in response to an appeal to patriotism, but the conversion issues must be placed on an investment basis. The current rate in the London market upon comparatively short term Treasury obligations is shown by the results of a sale on September 13 of £65,000,000 of 4½ per cent bonds, maturing in 1934 and redeemable on one year's notice after January 1,1929, at the option of either the holder or the Government. These bonds were sold upon invited tenders at an average price of £99-6-0d, per £100, making the yield to the earliest redemption date slightly under 5 per cent.

Debt Paid Off

The total provision for debt reduction from revenue and miscellaneous receipts from 1921 to 1926 was £708,000,000, or approximately

$3,500,000,000. This is a very great achievement in reduction, and excepting that of the United States in the same period, never has had a parallel. In the early years of the period large budget surpluses were available, but since the budget estimates have been made with greater exactness the main reliance has been upon the statutory sinking fund of £50,000,000 (approximately $250,000,000). Though by law this amount must be provided annually from revenue for the cancellation of debt, its operations may be partly nullified by creation of new short term debt to meet budget deficits, and this has occurred in the last two years, but for only part of the stated amount and to meet contingencies not in sight when the budgets were prepared. In the fiscal year 1925-1926 it was due to a subsidy to the coal industry, paid by the Government to avert a strike, and in 1926-1927 the deficit was due to the coal strike, which seriously affected the public revenues.

Recent United States Treasury Refunding

The prevailing interest rates upon the British debt seem high in comparison with the rates at which the United States Treasury this year has refunded the 2nd Liberty 4¼ per cent loan, due November 15, 1927. The loan was issued November, 15, 1917, callable in ten years and due in twenty-five years, and the original amount was $3,807,865,000. When refunding operations began last March the amount outstanding had been reduced by application of revenues to $3,104,520,000. As of March 15, the sum of $1,360,456,450 was converted at par into 3½ per cent Treasury notes of 1930-32. An offer of conversion into 3 3/8 per cent Treasury bonds of 1943-47 did not quite meet the views of holders, bringing in only $245,256,000, but with purchases for the sinking fund the amount outstanding at the end of the fiscal year, June 30, was reduced to about $1,308,000,000. On September 15 another offer of conversion into 3½ per cent, 1930-32, notes was made, open to October 1, and at the close of business that day the amount of 4¼s outstanding was down to $892,843,200. Further purchases for the sinking fund have been made in the past month, and the Treasury has stated that further financing will take place to clear up the remainder on November 15. The amount of the final offering has not been announced, but inasmuch as the remaining bonds are largely in the hands of small holders, and probably will be slow in coming in, and as the Treasury is strong in the general fund, it probably will not be over $500,000,000.

As already stated, the comparatively unfavorable terms of British refunding operations have been due to the rapid maturity of large loans, which has forced the Treasury's hand, whereas in the United States the Treasury has been able by reason of large surplus revenues to make terms to the market. Moreover, the general investment market is on a lower basis in New York than in London.

Cuban Sugar Control

In the sugar industry, developments looking towards a further possible restriction of production in Cuba during the coming season and an extension of control over distribution have been coming to a head. On October 4 President Machado signed the new Sugar Defense Law passed by the Cuban Congress which provides for,—

1. A commission of five members appointed by the President to study world conditions of production, distribution, and consumption, on the basis of whose findings the President shall determine each year the total production to be allowed for the ensuing season, together with its distribution to the principal countries of consumption.
2. A fine of $20 for every bag of 325 pounds and 96 degrees polarization produced in excess of the allowance for each mill.
3. A Government export corporation to be known as "Cuban Sugar Export Corporation," capital to be subscribed in proportionate amounts by each producer, and which will be charged with the exclusive sale of all sugar over and above that allocated to the United States or consumed in Cuba.

The law is to be effective until 1932-33 when it will terminate automatically unless renewed by the Cuban Congress prior to May 30, 1933.

A further important provision of the bill, applicable to the present crop, authorized the Sugar Commission to take possession and dispose of 150,000 tons of sugar from stocks of the 1926-27 crop still on the island. This sugar was immediately taken over by the Commission and disposed of to British interests at the price of 2.34 cents f. o. b. Cuba, or 44 points below the New York parity. This hasty transaction while removing this sugar from supplies available to the United States has had a further unsettling effect on the market. It is not understood how the difference between the price of this sale and the market price at the time will be reimbursed to the owners of the sugar taken, although an injustice will have been done if the burden is not shared equally by all producers.

The effect of this legislation is to give to the Cuban Government the power of arbitrarily determining the size of the crop and to place in its hands complete power as to the disposition of the surplus. It is proposed first to estimate as closely as possible the Cuban home consumption and requirements of the United States and to allocate a sufficient amount of sugar to cover these needs. It is then proposed to turn over the balance to the Export Corporation to be sold in other markets with the intention that if the representative of the Export Corporation, who has been sent abroad to confer with the principal European sugar

groups on the subject of reciprocal arrangements for the control of production, receives no encouragement in this direction, the Export Corporation can be employed to make effective use of the Cuban surplus in competition with these other countries.

The theory, however, is that by keeping United States supplies limited closely to actual requirements it will be possible to maintain prices here enough above the world market to enable Cuba to get the advantage of the .44¢ tariff differential which Cuban sugar enjoys over full duty sugars. Inasmuch as Cuba sells the bulk of her crop to the United States it is figured that it will pay her to sell a relatively small amount in other countries at a loss if by so doing she is able to obtain a better price for the larger amount sold in this market. The plan resembles in many respects the late McNary-Haugen bills in this country, which proposed to dump our agricultural surplus abroad, at a sacrifice if need be, in order to sustain prices on the remainder consumed at home.

Effects of Restriction

With this latest move it is apparent that Cuba is being drawn further and further along the path of artificial regulation. The first step was taken in 1926 when with sugar selling down around 2¼ cents a pound, the Cuban Government adopted measures prohibiting the clearing of ground for new cane plantings until January 1,1927, and limiting the 1926 crop to 90 per cent of estimated output. Prices not responding in a satisfactory manner, the next move was to prohibit grindings on the 1927 crop prior to January 1,, and later to restrict production of that crop to 4,500,000 tons.

Combined effect of various restrictive measures and a decrease in the European beet crop of 1926-27 was to bring about a gradual advance in prices to a high of 3⅜ cents in December 1926.

Improvement, however, was short-lived, as it soon became apparent that while Cuba was restricting production there would be a large increase in countries not cooperating in the curtailment program. European plantings last Spring were the largest since the war and promise a crop this Fall more than 700,000 tons greater than was produced last year (exclusive of Russia, whose crop is not a factor in the world market). In the Far East, Java is harvesting a crop 370,000 tons greater than last year's. To what extent these increases are due to higher prices, to Government bounties, tariffs, or other causes is impossible to say. Probably a combination of all factors has been influential. The fact is, however, that Cuba's voluntary sacrifice of output has been offset by increases in other countries so that prices once more have fallen, and Cuba, instead of being nearer to the solution of her difficulties, finds herself producing a smaller proportion of the world crop and experimenting with still more stringent regulative measures.

Artificial Control vs. Freedom of Markets

Without going into the technical difficulties involved in administering the new law, or the possible political effects in the United States, it is in order to consider whether in the long run these measures are likely to be of benefit to Cuba. On the side of restriction, it may be said that it has undoubtedly bolstered up prices somewhat during the past year. At the same time it has rendered conditions more favorable for an increase of production in other countries, imposed a heavy burden on the colonos, part of whose cane has been left uncut, caused widespread unemployment, raised Cuban costs of production in the face of world competition and shown signs of forcing the sugar interests in the respective European countries to come together in "cartels" or groups for self protection. As against this course the alternative was a policy of doing everything in a practical and political way to enable the island to make the greatest amount of sugar at the lowest possible cost in competition with other countries, resulting ultimately in stabilization with the low cost producers in the ascendency. With the issue thus clearly marked of artificial control versus freedom of markets, the question may be fairly put as to which is the sound economic course for Cuba to take as one of the world's lowest cost producers.

California Freight Rates

The Interstate Commerce Commission has granted the petition of the California Growers and Shippers League for a reduction of freight rates on deciduous fruits, lowering the carload rates on such fruits, excepting apples, from $1.73 per hundred pounds to $1.60 to eastern points, and from $1.62 to $1.50 to Denver and the Rocky Mountain territory. This application was strenuously resisted by the railroads, and a similar complaint by the League in 1923 was dismissed with a ruling that the rates as a whole were not unreasonable or unduly prejudicial. The new complaint alleged that conditions had changed in several respects, and particularly that owing to the decline of prices the proportion of the price which the farmer had to pay for transportation had increased from 24 per cent in 1917 to 35 per cent in 1926, that the increase in volume of traffic justified a reduction of rates, and that lower rates had been granted on other commodities to meet the Panama Canal competition; also that a reduction was called for under the terms of the Hoch-Smith Congressional resolution, which instructs the Commission to review the entire

structure of rates with a view to reductions in agricultural products to the "lowest possible lawful rates compatible with the maintenance of adequate transportation service."

The railroad companies urged that the existing rates were reasonable for the service given, which requires refrigerator cars, loaded for the most part only one way, and moved on faster than ordinary freight train time; moreover, that the over-production which had lowered the selling price of the fruit was not chargeable to them and might render a reduction of freight rates abortive as a relief measure.

The principal commodity in the class of deciduous fruits is grapes. The increase in acreage of the several kinds of fruit affected, the total California production and the farm value, in 1921 and 1926, are shown in the following table:

	Bearing Acreage	Production (Tons)	Farm Value Per Ton	Farm Value Total	*Interstate Shipments
1921					
Grapes	362,000	520,000	$78.00	$40,340,000	30,200
Peaches	100,713	310,000	42.00	13,020,000	3,453
Pears	31,808	86,000	62.50	5,375,000	4,384
Apricots	58,369	100,000	50.00	5,000,000	348
Prunes	108,185	100,000	130.00	13,000,000	—
Plums	19,715	42,000	53.00	2,226,000	3,113
Cherries	9,082	13,000	125.00	1,625,000	665
Figs	11,472	9,600	145.00	1,392,000	—
Miscellaneous	—	—	—	—	257
Total	701,344	1,180,600	$69.00	$81,978,000	42,420
1926					
Grapes	662,104	1,026,000	$32.00	$32,785,000	60,786
Peaches	150,822	541,000	39.00	21,099,000	1,619
Pears	58,138	207,000	35.00	7,245,000	9,891
Apricots	80,724	176,000	63.00	11,088,000	264
Prunes	165,199	150,000	100.00	15,000,000	—
Plums	33,827	71,000	25.00	1,775,000	5,221
Cherries	12,593	20,000	180.00	3,600,000	741
Figs	45,132	11,350	95.00	1,078,000	85
Miscellaneous	—	—	—	—	293
Total	1,208,539	2,202,350	$42.00	$93,670,000	78,909

*Carlots, including express.

It will be seen that the production of grapes has nearly doubled since 1921, breaking the farm value per ton from $78 to $32. Of course, the price of grapes has been affected in all parts of the country, and since the ruling of the Interstate Commerce Commission upon California rates has been made public the grape-growers of Ohio, Pennsylvania and other states have filed a complaint that the freight rates upon their product are now excessive in comparison with the rates upon California shipments and asking that they be reduced. Obviously, railroading, as well as farming and fruit-growing, is beset with difficulties. Railroad officials are disposed to question whether competition in grape production would become any less effective upon prices if all grapes were carried to market free of charge. The freight charge even from California to New York is an almost negligible factor in the retail price.

The Census of Manufacturers

The Bureau of the Census has not yet completed the compilation and publication of the returns of the 1925 Census of Manufacturers, but has given out figures for aggregate production and also for the principal industries, together with comparative statements showing the growth of the industries since 1899. The showing is interesting and remarkable, not simply as a record of industrial expansion, but, in this time of social agitation, as a demonstration of the relation of industrial progress to social progress. It goes without saying that the increase of production means a corresponding increase of distribution and a general rise in the standard of social welfare.

In the 26 years from 1899 to 1925 the population of the United States increased by 54 per cent, the number of persons engaged in manufacturing increased 87 per cent, and the quantity of manufactures produced is calculated to have increased by approximately 178 per cent. Upon this basis the output of the industries, reckoned upon the number of persons engaged in them, increased by nearly 50 per cent per capita.

Changes in the Industries

The summary is a calculation made by the Census Bureau. Of course, there can be no exact comparison of factory output in any two census years. The industries change from year to year, and in 26 years the changes are many. There is no uniformity of gain among them. Some of the old ones have fallen off under the competition of the new, and there are many new industries which scarcely figured at all in 1899.

The carriage industry, for example, has almost disappeared and the automobile industry, which was only beginning in 1899, has risen to the first rank in value of product. Satisfactory figures for this industry in 1899 are not available, but in the six years from 1919 to 1925 the volume of motor car production increased 204 per cent, while the number of employes increased only 24 per cent. The results of this remarkable gain in the efficiency of the industry have been seen in better cars at lower prices.

The lumber industry has almost stood still since 1899, so far as volume of production is concerned, due to higher costs for its raw material. On the other hand, the stone, clay and glass industries have increased production by 166 per cent, while the number of wage-earners increased 68 per cent. Included in this group is the cement industry, in which production increased over 1,000 per cent, while the number of wage-earners increased at about one-third that rate. The production of glass increased 372 per cent, while the number of wage-earners increased 131 per cent.

Although the population increased 54 per cent, the old industry of flour-milling increased its output by only 4 per cent in the 26 years, which is striking evidence that the American

people have been tending to a more varied diet. The output of boots and shoes increased by 48 per cent, or slightly less than the increase in population. In the textiles, the production of woolens and worsted goods increased 60 per cent, while the number of employes increased 31 per cent, and the production of cotton goods increased 76 per cent, against an increase of 52 per cent in number of employes. In silk goods the production increase was 342 per cent, and increase in number of employes 103 per cent. The rayon, or artificial silk industry, which did not exist in this country in 1899, has become an important factor in some lines.

In general, the tendency of the production increase has been in what have been regarded in the past as luxury goods, or in industries which are supplying machines or services that are doing work heretofore done by hand labor. The new purchasing power arising from economies in production flows naturally into new kinds of goods. Thus, the increased production of textiles is not in the old staples, but in new makes. Style, beauty, and considerations other than of mere utility have become dominating factors in industry.

The Household Labors

The labors of the household, which at one time included the making of the family clothing, are being further lightened by a great expansion of the baking, canning and laundry industries, the production of a great variety of manufactured food products, and the service of numerous electrical appliances. These are significant of easier living conditions in the home, and also of increased spending ability.

The telephone service has had enormous expansion; the moving picture industry also; the phonograph and radio have become common house furnishings. Unquestionably these are features of a higher standard of living, and so is the greater variety of food, which results largely from improvements in the transportation system. Some persons might raise a question as to whether or not the enormous increase in the consumption of confectionery, cosmetics and cigarettes signifies a rise in the standard of living, but undoubtedly it signifies increased spending power. What use the people shall make of increasing purchasing power must be left to their own determination.

The Iron and Steel Industry

The iron and steel industry is one of very general importance. Its advancement is identified with general welfare and community progress. It serves all the industries. Its products are wanted for construction work and for equipment and machinery in the production of the general supply of consumption goods and community services. The census gives the increase in the production of "iron and steel and manufactures" at 204 per cent and the increase in number of wage-earners at 102 per cent.

Besides this gain in quantity production there was improvement in the metallurgy of steel. By the use of the electric furnace and various alloys, steel products of greater tensile strength and qualities of endurance are available to the industries. A rustless steel is on the market, and other important achievements are said to be impending.

Increased Production Accompanied by Increased Purchasing Power

The outstanding feature of all this development is the fact that increasing production has been closely accompanied by increasing purchasing power in the hands of consumers and increasing consumption. The National Industrial Conference Board, which has constructed an index of wages in the principal industries and also an index of the cost of living, calculates that the average of real wages, or in other words, the purchasing power of wages measured against living costs, was 33 per cent higher in 1925 than in 1914. There are other calculations upon the cost of living and the rise of real wages, but they do not differ greatly from these.

We would know, however, without any calculation, that this must be so. Distribution and consumption must keep pace with production, or production would have to slow down to their pace. The great mass of production is of goods of general consumption, and the fact that they are distributed is conclusive evidence of a general increase of buying power.

Reduction of Working Hours

In considering the achievements of the industries and distribution of the benefits it is necessary to include the reduction which has occurred in the hours of labor in the period under review. This has been calculated by competent authorities at approximately 16 per cent.

We have then to the credit of industry a great increase in productivity per worker, a fairly corresponding increase in real wages, and this reduction in the average hours of labor. How has all this been accomplished?

Increase in Power Equipment

The most tangible factor as revealed by the census returns is the increased capacity of power equipment in the industries. In this period, while the population increased 54 per cent and the number of persons engaged in the manufacturing industries increased 87 per cent, the installed capacity of primary horse-power increased 256 per cent. In 1899 the industries had 2.1 horse-power to each worker, and in 1925 they had 4.3 horse-power to each worker.

The percentage of increase in available power is much greater than the percentage of increase in production, which shows that power is used more freely than formerly. Artificial power is relieving the workers of physical toil, another benefit from industrial progress.

Improvements in Methods and Machinery

The increased use of power is not the only cause contributing to increased production. There is improvement in organization, in methods and in machinery. There is improvement in the generation of power. The Department of Commerce, through The Geological Survey, collects the figures for the consumption of coal and other fuels in the generation of power by the central power stations throughout the United States. These figures do not go back of 1919, but in that year the average consumption of coal or its equivalent was 3.2 pounds to the kilowatt hour, and in 1925 the average consumption was 1.95 pounds to the kilowatt hour, a reduction of 39 per cent. Notwithstanding the rise of wages, fuel and other costs, electric light and power service is sold at lower rates than before the war.

Economies in Railroad Operations

Similar gains have been made in the production of locomotive power. The average consumption of coal, per gross ton mile of freight hauled by all the railroads in 1920, was 19.7 pounds, and in 1926 was 15.5 pounds, an average reduction upon all freight carried of 21.3 per cent, accomplished in the last six years.

But the economies in railroad operations were by no means all in coal consumption. From 1899 to 1925 the number of locomotives on the railroads of the United States increased from 36,000 to 67,000, or by 82.5 per cent, but the increase in their tractive capacity was 260 per cent; the number of freight cars increased 86 per cent, but the increase in the load capacity was 194 per cent; the number of railroad employes increased 97 per cent, but the ton miles of revenue freight handled increased by 264 per cent and the number of freight train miles increased only 22 per cent. While this was being done the working day in railroad service was reduced to eight hours.

If we look for the explanation of this increase of railroad efficiency, we find that while the miles of railroad line increased only 32 per cent, the capital investment increased 134 per cent. This is the immediate explanation, but back of that investment was intelligent and enterprising management, utilizing the skill and research work and inventions of engineers, chemists, scientists and leaders in every department of modern knowledge.

It is noteworthy that the hazards of railroad service have been reduced, and that the physical toil has been lightened by the latest equipment. Automatic couplers, air brakes, automatic stokers and other devices have made railroading safer and less laborious.

It is of great significance as to the distribution of the benefits of these economies in railroad operations that during the period under review (1899-1925) the average pay of all railroad employes increased by 191 per cent, while the average receipts of the railroads per ton mile of freight carried increased but 55 per cent.

Wages and Prices in the Steel Industry

Another concrete example of the distribution of the benefits of industrial economies is afforded in the steel industry. We have given the census figures for production gains in the iron and steel industry from 1899 to 1925. Mr. Theodore W. Robinson, Vice President of the Illinois Steel Company, in a recent address, has stated that the average annual wage of all the employes of that company in 1901 was $825 and in 1926 was $1,870, an increase of 127 per cent, and that the hours of labor were reduced 18 per cent in the same time. The "Iron Age," an authority in the industry, has published weekly since the beginning of 1903, tables showing the composite price of the several grades of pig iron and of the principal crude steel products. These tables show that notwithstanding the advance of wages and other costs, pig iron is selling in 1927 at practically the same average price as in 1903 and steel at prices only about 25 per cent higher.

The Capitalist System

This chapter in our industrial history affords a demonstration of the essential validity of the orthodox theories of natural law in the economic world, upon which is based the free system of industry commonly known as the capitalist system. It shows this system to be controlled by inherent forces which work ceaselessly to improve the industrial organization, to enlarge the production of desirable things and to effect a wide distribution of the benefits of industrial progress.

This period, however, is not different, except perhaps in rapidity of development, from other periods in the history of industry. All the development of the past is the result of the same natural laws and tendencies. Society is racked almost to the point of dissolution over theories of conflicting class and group interests, although evidence of the fundamental harmony of interests is always in view.

(This discussion will be continued next month.)